

## A NEW MEXICAN GENUS OF PLEUROCERATIDÆ.

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*Read 10th December, 1909.‡*

Among the shells collected by Mr. A. A. Hinkley during his last journey to Mexico (January and February, 1909), were two species of the family Pleuroceratidæ which cannot be referred to any of the known genera. Up to this time no member of this family has been recorded south-west of central Texas, where *Goniobasis convalensis*, Pilsbry, is found in the streams of Hays, Comal, and Bexar counties.<sup>1</sup>

## LITHASIOPSIS, n.gen.

Shell varying from cylindric with conic spire to ovate-turrite, similar in contour to *Goniobasis* or *Lithasia*, solid. Aperture ovate or piriform, rounded at the base; outer lip thin and acute; columella concave, broad; parietal wall covered with a heavy callus, which is thickest near the posterior angle of the aperture. Operculum very shortly ovate, nearly circular, the nucleus at its lower fourth. Inside there is an oblong dull area of attachment along the columellar side, bounded by a raised border or brown cord; the rest of the inner face being glossy.

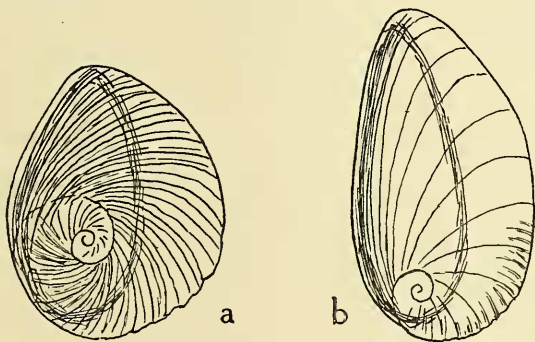


FIG. 1. a, *Lithasiopsis Hinkleyi*; b, *Lithasia obovata*.

Radula similar to that of *Anculosa*. The central tooth is short and wide, with 3, 1, 3 denticles, the body of the tooth smooth below the cusps. The admedian tooth has a very broad, truncate inner cusp and two small outer ones. Its body projects at the lower inner angle. The inner and outer lateral teeth or uncini have five and ten denticles respectively. The shank of the inner uncinus is dilated towards its base.

*Type.*—*L. Hinkleyi*.

<sup>1</sup> Pilsbry & Fernis, Mollusca of the South-Western States, II: Proc. A. N. S. Philad., 1906, p. 167.

Shells of this genus have the heavily calloused inner lip of *Lithasia*, but differ from that genus by the operculum, which in *Lithasia* is oblong with almost basal nucleus (fig. 1b, *L. obovata*, Say). Some forms of the heterogeneous group *Goniobasis* have a similar operculum, but they differ by the thin parietal callus. *Lithasiopsis* is not unlike *Melanopsis* in the calloused columella, but it differs in important features of the dentition. In dentition *Lithasiopsis* stands nearest *Anculosa*, which it resembles in having the inner cusp of the admedian tooth enormously developed.

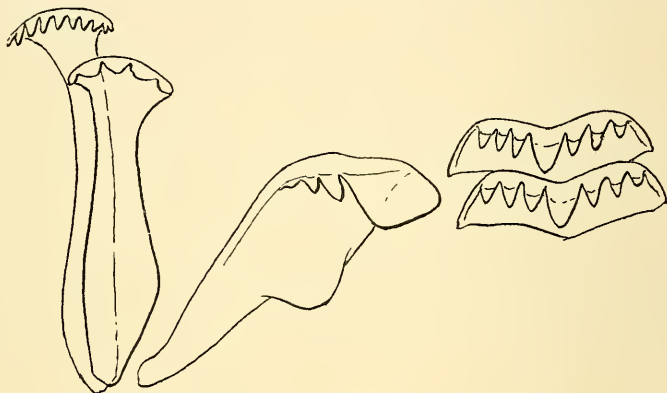


FIG. 2. *Lithasiopsis Hinkleyi*.

*Lithasiopsis* inhabits streams tributary to the Panuco River. This river system has one of the richest faunas of freshwater shells in Mexico. Mr. Hinkley's researches have brought to light a considerable number of Unionidæ; a fine group of *Pachycheili*, including several globose forms like *Paludomus*; species of *Somatogyrus*, *Amnicola*, *Potamopyrgus*, *Cochliopa*, *Emmericia*, *Pterides*, and *Gundlachia*, etc. Except the Lymnæidæ most of the species are unknown elsewhere, but a few extend as far south as Vera Cruz, and some others north to the Rio Grande.

LITHASIOPSIS HINKLEYI, n.sp. Figs. 1a, 2, 3.

The shell is cylindric, or oval cylindric, with a short acute spire with concave outlines; solid, dull yellow or greenish-yellow. The first  $1\frac{1}{2}$  whorls are smooth, glossy, and convex; the following  $1\frac{1}{2}$  to  $2\frac{1}{2}$  whorls dull, only slightly convex, showing a keel or thread above or in the suture below. In the typical form the following whorl has an acute median spiral thread. The penultimate and next earlier whorls bear three strong spirals, and these continue upon the last whorl, which has a group of spiral cords at the shoulder, is smooth and flat or concave in the middle, and has weak spiral cords on the base. (In the smooth form the later whorls are without spiral sculpture, and it may be very weak or almost wanting on the spire.)

The aperture usually exceeds half the total length, is ovate or piriform in shape, and white within. The outer lip is thin and sharp, arcuate or straightened; basal margin arcuate. Columella concave. Columellar and parietal margins are covered with a very heavy white callus, which is thickened into a low nodule or pad near the posterior angle of the aperture.

Length 13.8, diam. 7.1 mm.

„	13.5	„	7.9	„
„	12.3	„	6.8	„
„	11.9	„	7	„

The operculum is rounded-ovate, smaller and especially shorter than the aperture.

*Hab.*—Coy River, a tributary of the Panuco, State of San Luis Potosi, Mexico.

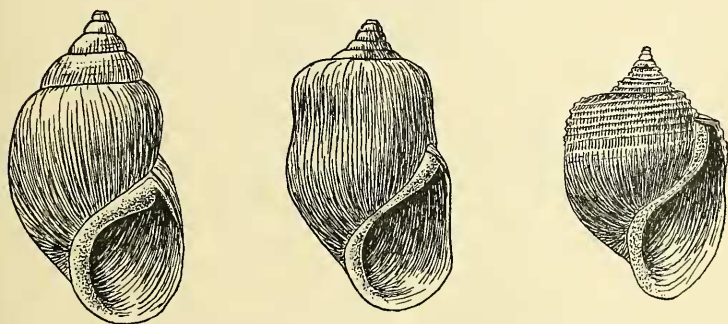


FIG. 3. *Lithasiopsis Hinkleyi*. Two adult and one young example.

This species has much in common with *Lithasia obovata* (Say). The general shape, colour, and columellar callus are similar; but the operculum differs widely. The shape of shell and aperture are remarkably variable, but even in the more ovate and lengthened examples, the last whorl is decidedly shouldered, unlike the following species. As in many Pleuroceratidae, smooth and spirally striate forms coexist in the same colonies.

#### LITHASIOPSIS MEXICANUS, n.sp. Fig. 4.

The shell is ovate-turrite, with straightly conic spire; solid, lustreless, variously coloured; olive-yellow, uniform or with a blackish olive median band, or purplish black, paler below the suture. The first  $2\frac{1}{2}$  whorls are smooth and convex, the following whorls flattened, at first smooth, but about the fifth whorl a few spiral threads appear. These threads continue to the penultimate whorl, where they decrease, leaving the last whorl smooth; or they may persist as very weak angles on the last whorl. Whorls 9 or 10 in complete examples, but the earliest ones are generally worn or eroded in adult individuals. Last whorl convex. Aperture ovate, livid white

or dark inside; outer lip thin and acute, slightly sinuous, advancing slightly below, retracting a little towards the columella and above. Columella concave, broadly white-calloused. Parietal wall in adults covered with a rather thick white callus, heavier towards the posterior or upper angle.

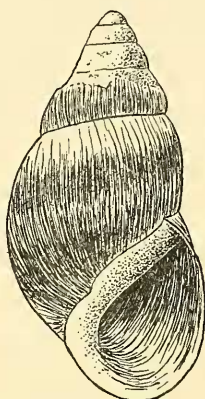


FIG. 4. *Lithasiopsis Mexicanus*, n.sp.

Length 16; diam. 8.2 mm.; aperture 7.8 mm. long.

„	17.5	„	8	„	„	7	„	„
„	15	„	7.3	„	„	6.8	„	„

Operculum like that of *L. Hinkleyi*.

*Hab.*—Montezuma River, at the ford, a short distance above Tampamolón, State of San Luis Potosí, Mexico.

This species has the appearance of a *Goniobasis*, but differs from that genus by its calloused columella. The dominant colour form is dull yellow, with one or several dusky bands on the last whorl and a bicoloured spire, each whorl light above, dark below; but some examples are uniform yellowish or yellowish brown, and very few (4 per cent. in the lot examined) are purplish or brownish black.